

**WHAT IS CLAIMED IS:**

1. A circuit for detecting an electric current constructed to detect a peak value of an input current using a diode having a cathode connected to an input side and an anode connected to an output side and a capacitor having one end connected to the anode of the diode and the other end being grounded, wherein the circuit further comprises a zener diode having an anode connected to the anode of the diode and a cathode being grounded.
- 10 2. A circuit for detecting an electric current constructed to detect a peak value of an input current using a diode having a cathode connected to an input side and an anode connected to an output side and a capacitor having one end connected to the anode of the diode and the other end being grounded, wherein the circuit further comprises a shunt resistor having one end connected to the anode of the diode and the other end being grounded.
- 15 3. A circuit for detecting an electric current constructed to detect a peak value of an input current using a diode having a cathode connected to an input side and an anode connected to an output side and a capacitor having one end connected to the anode of the diode and the other end being grounded, wherein the circuit further

comprises:

- a zener diode having an anode connected to the anode of the diode and a cathode being grounded; and
- a shunt resistor having one end connected to the anode of the diode and the  
5 other end being grounded.